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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/678,319	10/03/2000	Robert P. Siegel	105715	4804

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EXAMINER

BARBEE, MANUEL L

ART UNIT	PAPER NUMBER
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2857

DATE MAILED: 01/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/678,319

Applicant(s)

SIEGEL ET AL.

Examiner

Manuel L. Barbee

Art Unit

2857

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2,4-9,11-17,19,24-27,29-31,33,37 and 39-44 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 2,4,5,19,24-27,29-31,33,37,39-41 and 44 is/are allowed.
- 6) ☒ Claim(s) 6-9,11-15,17,42 and 43 is/are rejected.
- 7) ☒ Claim(s) 16 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 6-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hill, Jr. et al. (US Patent No. 5,057,866) in view of Swerling et al. (US Patent No. 4,192,451).

With regard to collecting and processing data, as shown in claim 6, Hill, Jr. et al. teaches logging events and physical data in a copier (col. 4, lines 6-37; Figure 3, log file 158, physical data file 185). With regard to obtaining an initial diagnosis and sending the data over a distributed network based on the initial diagnosis, as shown in claim 6, Hill, Jr. et al. teach comparing the data to thresholds and sending data to a remote computer if necessary (col. 6, lines 9-31; col. 4, line 47 - col. 5, line 4). With regard to a remote diagnostic system that analyzes the received data and sends a communication based on the analysis, as shown in claims 6 and 7, Hill, Jr. et al. teach a remote computer that further analyzes the collected data, responds and indicates corrective action (col. 6, lines 9-48). Hill, Jr. et al. do not teach detecting a signature waveform and digitizing, as shown in claim 6. Hill, Jr. et al. do not teach analyzing the waveform, as shown in claims 7-9 and 31.

Swerling et al. teach a diagnostic system that uses signature analysis to locate faults in a device under test by detecting a signature signal and comparing it to a known

Art Unit: 2857

good signal (Abstract; col. 1, line 63 - col. 2, line 21). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the copier calculator, as taught by Hill, Jr. et al., to include a diagnostic system using signature analysis, as taught by Swerling et al., because then faults would have been quickly and easily located (Swerling et al., col. 1, lines 6-15).

3. Claims 11, 12, 17, 42 and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hill, Jr. et al. in view of Swerling et al.

With regard to a remote diagnostic system and a transmission circuit, as shown in claims 11 and 42, Hill, Jr. et al. teach a remote diagnostic system that analyzes received data and indicates corrective action (col. 6, lines 9-48). Hill, Jr. et al. do not teach at least one sensor that detects a signature waveform, a signature analysis circuit or an analog-to-digital converter that digitizes the signature waveform, as shown in claims 11, 42 and 43.

With regard to at least one sensor that detects a signature waveform and a signature analysis circuit, as shown in claim 11, Swerling et al. teach a diagnostic system that employs signature analysis that includes a data probe for detecting data and passing it to a signature generator (col. 4, line 54 - col. 5, line 37). With regard to analyzing the signature waveform and an analog to digital converter that digitizes the signature waveform, as shown in claims 11, 42 and 43, Swerling et al. teach comparing the signature waveform to a known good waveform to determine whether a fault exists (col. 4, line 54 - col. 5, line 37). Since the comparison happens in a microprocessing unit, analog-to-digital conversion would have been necessary. It would have been

Art Unit: 2857

obvious to one of ordinary skill in the art at the time the invention was made to modify the copier calculator, as taught by Hill, Jr. et al., to include a diagnostic system using signature analysis, as taught by Swerling et al., because then faults would have been quickly and easily located (Swerling et al., col. 1, lines 6-15).

With regard to sending a communication based on the analysis, as shown in claim 12, Hill, Jr. et al. teach indicating corrective action in a response (col. 6, lines 9-48). With regard to sending communication over a distributed network, as shown in claim 17, Hill, Jr. et al. teach using a modem for communication (col. 6, line 9-48).

4. Claims 13 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hill, Jr. et al. in view of Swerling et al. as applied to claims 11 and 12 above, and further in view of Kennedy et al (US Patent No. 4,241,406).

Hill, Jr. et al. and Swerling et al. teach all the limitations of claims 11 and 12 upon which claims 13 and 15 depend. Hill, Jr. et al. and Swerling et al. do not teach sending repair information to a third party or a service request notification, as shown in claims 13 and 15. Kennedy et al. teach marking an inkjet head for service (col. 5, lines 49-54). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the copier calculator combination, as taught by Hill, Jr. et al. and Swerling et al., to include marking a part for repair, as shown in Kennedy et al., because then the repair person would have been able to quickly repair the necessary parts.

5. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hill, Jr. et al. in view of Swerling et al. as applied to claims 10-12 above, and further in view of Rosenbaum et al (US Patent No. 6,584,430).

Art Unit: 2857

Hill, Jr. et al. and Swerling et al. teach all the limitations of claims 10-12 upon which claim 14 depends. Hill, Jr. et al. and Swerling et al. do not teach sending a parts request from the remote diagnostic system, as taught in claim 14. Rosenbaum teach remotely monitoring an analysis device and ordering a component when needed (col. 1, lines 45-64). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the copier calculator combination, as taught by Hill, Jr. et al. and Swerling et al., to include ordering parts, as taught by Rosenbaum et al., because then it would not have been necessary for a technician to be on site for all repairs (Hill, Jr. et al., col. 1, lines 5-66).

Allowable Subject Matter

6. Claims 2, 4, 5, 19, 24-27, 29-31, 33, 37, 39-41 and 44 are allowed.

7. Claim 16 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

8. The following is a statement of reasons for the indication of allowable subject matter: Neither Hill, Jr. et al. nor Draeger et al. teach a diagnostic system that collects and processes data, analyzes the data, sends the data over a distributed network to a remote diagnostic system based on the initial diagnosis, analyzes the data at the remote diagnosis system and sends a communication based on that analysis of the data where the communication can include a revised set of operating instructions based on the analysis of the data by the remote diagnostic system in order to correct a failure or prevent a failure of the system.

Response to Arguments

9. Applicant's arguments with respect to claims 4, 6, 11, 19, 33, 42 and 44 have been considered but are moot in view of the new ground(s) of rejection.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Manuel L. Barbee whose telephone number is 703-308-0979. The examiner can normally be reached on Monday-Friday from 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marc S. Hoff can be reached on 703-308-1677. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306 for regular communications and (703) 872-9306 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-0976.

mlb
January 2, 2004


MARC S. HOFF
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800